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ABSTRACT

An investigation of the attitudes of three groups of key administrative-supervisory personnel in the 24 local education agencies of the State of Maryland, the study focused on 108 individuals from central office personnel, 69 principals from area vocational high schools, and 111 principals of comprehensive high schools to determine their perceptions toward the career education concept. It investigated views toward the importance and need of career education, grade span and content of career education, implementation of career education, vocational education philosophy, and vocational education expansion. A Likert-type career education scale was selected for gathering data. No significant differences were revealed among the attitudes of the three groups concerning the purposes, content, progression, and need for career education; involvement of all students in career education; philosophy and expansion of vocational education; and the idea that career education will provide a unified school. Significant differences were found among the attitudes of school superintendents, directors of career education, directors of guidance and counseling, directors of instruction, and directors of vocational education toward item 2, "Public schools have not helped in giving sufficient orientation about occupational choices to students." A copy of the Career Attitude Scale-Survey Instrument is included. (EA)

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A Study of

ATTITUDES TOWARD CAREER EDUCATION

of Key Administrative-Supervisory Personnel

in the State of Maryland

Occasional Paper in Research

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Division of Research, Evaluation, and Information Systems
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November 1974

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This study was conducted by
Otho Eli Jones
Specialist in Career Development
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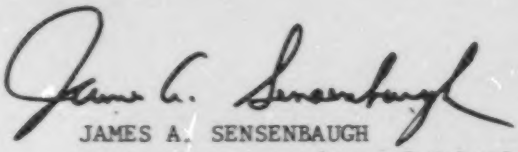
PREFACE

Career education continues to be identified as a priority area -- nationally, at the state level, and with most of our local school systems. At the present time, approximately twenty percent of our students are involved in identifiable career education programs. While this degree of involvement is a major accomplishment, we should remind ourselves that we are striving to provide all students with the opportunity to participate in career education activities and programs.

It is encouraging to note from the results of this study, the agreement among educational administrators, vocational educators, guidance personnel, and instructional personnel that career education is for all students and that it should be an important aspect of the total educational program. This attitude, shared by key personnel in our schools, should be a positive factor in the further implementation of this priority area.



JAMES A. SENSENBAUGH
State Superintendent of Schools

FOREWORD

The Division of Research, Evaluation, and Information Systems of the Maryland State Department of Education, in its continuing policy of making available selected research-based findings to the Maryland educational community, is pleased to present "A STUDY OF ATTITUDES TOWARD CAREER EDUCATION OF KEY ADMINISTRATIVE-SUPERVISORY PERSONNEL IN THE STATE OF MARYLAND."

This study was carried out by Otho Eli Jones, Specialist in Career Development, Division of Vocational-Technical Education.

Grateful acknowledgement is made to every individual who made this study possible. Gratitude is extended to school superintendents, and directors of career education, guidance, instruction, and vocational-technical education, and high school principals in the twenty-four public school systems in Maryland.

We are indebted to the Division of Vocational-Technical Education for its encouragement and support and the Maryland Task Force for Career Education for its motivation and facilitation of this study.

An expression of appreciation is also reserved for Mr. Leo E. Lezzer, Dr. Kwi-Yoon Lee, and Dr. Mohammad A. Shami of the Division of Research, Evaluation, and Information Systems for the valuable technical assistance in the planning and implementation of this investigation. Special gratitude is expressed to Dr. Rose Mary Bengel of the Division of Vocational-Technical Education for her inspiration and contribution to the research design and completion of this study.

We hope that this publication will be of value to the educators and students in Maryland.

Richard K. McKay
Assistant State Superintendent
Division of Research, Evaluation, and
Information Systems

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ABSTRACT

A Study of Attitudes toward Career Education
of Key Administrative-Supervisory Personnel
in the State of Maryland

The Problem

The purpose of this study was to investigate the attitudes of three groups of key administrative-supervisory personnel in the State of Maryland toward the career education concept. The following aspects of the problem were to be determined:

1. Whether they view career education as an important factor in helping to create a unified school system;
2. Whether the philosophy of vocational education should be a more structured view of education or a broader concept of career education;
3. Their views toward the proposition that career education should progress from the elementary through the secondary grades;
4. Their attitudes about the expansion of vocational education;
5. Their views toward what should be involved in career education;
6. Their views toward the need for developing career education programs;
7. Their attitudes toward the purposes of career education;
8. Their attitudes toward the implementation of career education in Maryland;

The Procedures:

The procedures included

1. a Likert-type Career Education Attitude Scale for gathering data;
2. review of literature;
3. selection of population;
4. analysis of data by use of chi-square and one-way analysis of variance;
5. formulation of findings, conclusions, and recommendations.

The Major Findings

The findings revealed that:

1. There were no significant differences among the attitudes of all groups concerning the purposes of career education;

2. The three groups had positive attitudes about involving all students in career education;

3. There were no significant differences among the three groups concerning the content of career education;

4. The attitudes of the three groups were inconclusive as to whether all education should be career education;

5. The three groups were found to show no significant differences in their attitudes about the proposal that expanded vocational education programs will better meet the needs of Maryland youth;

6. No significant differences were found among the attitudes of the groups toward the progression of career education in the public schools;

7. No significant differences were found among the groups toward the need for developing career education programs;

8. The three groups were found to show no significant differences among their attitudes concerning the idea that career education will provide a unified school;

9. There were no significant differences found among the attitudes of the three groups concerning the philosophy of vocational education;

10. Significant differences were found among the attitudes of subgroups (A), (B), (C), (D), and (E) toward Item 2, "Public schools have not helped in giving sufficient orientation about occupational choices to students";

11. Subgroups in Group II were found to show no significant differences among their attitudes toward the need for developing career education;

12. There was no significant relationship between the length of time in service and the attitudes of key administrative-supervisory personnel toward career education providing a unified school.

Recommendations

Recommendations were formulated that the findings of this study should be:

1. Shared with the key administrative-supervisory personnel in the State of Maryland;

2. Used as guidelines by the Career Education Task Force for designing staff and program development activities in Maryland;

3. Used to develop research to investigate attitudes toward career education held by students, teachers, elementary school principals, parents, employers, employees, and concerned community agencies.

SECTION I RATIONALE OF THE STUDY

A. Introduction

Career education has been a major thrust in American education in 1974. The concept is supported by national and state educational groups throughout the country. Dr. Sidney P. Marland, Jr., former Commissioner of the United States Office of Education (USOE), has made career education the password of his administration.

Alabama's State Department of Education[1] published the following position statement on Career Education:

> Career Education is a comprehensive educational approach to the preparation of citizenry for living as fulfilled human beings in a predominantly technical, specialized society. Career Education dictates the necessity for a total educational program which is relevant to the world of work and is programmed to provide for the development of an awareness of self and the world of work in elementary students, exploratory experiences for junior high and for senior high students knowledges and skills necessary to pursue further education or to become employed. Career Education is not to be conceived to replace or to be in addition to any educational programs in existence today. It is intended, however, to make educational subject-matter meaningful and relevant to an individual through re-structuring and focusing concepts around a career development theme.

Even with the presence of such published statements, there seems to be a growing skepticism about career education on the part of vocational educators, perhaps due to what is meant by the phrase "career education." Questions such as, "What is career education's relation to the present scope of education? Is it a substitute for other education? and Does it fit somewhere between the academic and the vocational in education?" are being asked.

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[1] _____, Alabama Career Education (Montgomery, Alabama: State Department of Education), pp. 1-12.

Since the present system of public education does not always equip students with awareness of the jobs available or the skills needed to enter successfully the world of work after finishing high school, career education has been suggested as the comprehensive educational approach to prepare the citizenry with knowledge and skills necessary to pursue further education or to become employed.

If the comprehensive career education concept is to be implemented in the school systems of Maryland and if one accepts the concept that attitudes are predispositions to overt responses, it then becomes necessary to explore the attitudes of key administrative-supervisory personnel in order to develop strategies to carry out implementation procedures.

It is generally accepted that the area of attitudes in education has not been studied as extensively as the area of cognition. However, existing research has shown that effective administrators have positive attitudes toward the tasks of administering and supervising education. Further, there is extensive literature in the fields of psychology, sociology, education, and political science dealing with the concept of "attitude" as a measurable variable. This concept is often invoked to account for consistency in social behavior.

For this study, attitudes will be considered the end products of the socialization process which significantly influence man's responses to cultural products, to other persons, and to other groups. Attitudes which are posited in the realm of personality are differentiated from other personality constructs in the following ways: they are relational; their referrals are specific; they have an evaluative function (they have positiveness or negativeness to the object); and they serve as predispositions

to overt responses.[1] As a determinant of human behavior attitudes exert considerable influence.[2] This is not to say, however, that a positive attitude will always insure positive action.

Investigation of attitudes of key individuals toward career education is strongly recommended. Assessment of such opinion will provide educational planners with valuable reference points for initiating programs of career education.[3] This information will have implications for providing baseline data for the future planning, development, and implementation of career education on the part of educational leadership in Maryland.

B. Need and Significance for the Study

A survey of related literature reveals that very limited research has been conducted nationally pertaining to attitudes toward career education, and that no research has been conducted in the State of Maryland on the attitudes of its administrative-supervisory personnel.[4]

In general, the present system of education has established purposes for preparing youth for their adult years. It has been suggested, however, that the youth of the nation should have a better opportunity to learn what the United States economic system and the world of work can mean.

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[1]Robert Krech, The Individual in Society (New York: McGraw-Hill Book Company, 1962), pp. 177-178.

[2]James A. Cardino, "The Nation of Attitude: An Historical Note," Psychological Reports, I (1955), pp. 345-352.

[3]Robert E. Taylor, Perspectives on Career Education, Presentation at the meeting of the Oregon Association of School Administrators, Corvallis, Oregon, March 30, 1972 (Corvallis, Oregon: Oregon State University, 1972), pp. 26-28.

[4]U.S. Office of Education, "Statement of Policy for Administration of Vocational Education," Bulletin No. 1 (Washington, D.C.: 1948), p. 1.

Realistically, most of the students in the public schools are not equipped with any type of skills that are needed to enter successfully the world of work after finishing high school.[1] There have been two philosophic directions in American education resulting in the general or the college preparatory curriculums and vocational training programs. Approximately 80 percent of the students who leave high school do not seek a college degree. The majority of high school graduates seek employment without any job skills.

Career education has been suggested by various authorities as a concept to help bring public education more parallel to the real life situations of students leaving the security of the public schools.[2] It has been proposed that this type of educational theory would not only help students prepare "for" employment, but it should also assist in the development of favorable attitudes toward all types of work. The attitudes about the psychological, social, and economic significance of work and the basic understanding of man's purpose in work would be affected.[3]

According to Smith[4], career education introduces a new set of values and requires a new climate--one in which there is no room for self-serving

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[1]Bruce Reinhart, "Building a Comprehensive Career Education System" (Chicago, Illinois: A Presentation to the National Council of Local Administrators Meeting with the American Vocational Association, December 2, 1972), p. 22.

[2]Larry McClure and Carolyn Baun, (ed.), Essays on Career Education (Portland, Oregon: Northwest Regional Educational Laboratory, April, 1973), p. 176.

[3]Olympus Research Corporation, Career Education: A Handbook for Implementation (Washington, D.C.: U.S. Government Printing Office, 1972), pp. 8-9.

[4]William L. Smith, "The Greening of Career Education" (Nashville, Tennessee: Address to the National Leadership Development Seminar for State Directors of Vocational Education, September 18, 1973), pp. 1-9.

dichotomies. He believes that vocational educators and the academicians will have to come together on a parity basis to blend their expertise. Not that there isn't room for a healthy interchange, but developing the career education concept with any integrity means that all concerned must work side by side in mutual respect, not only for one another but for a movement which implies a whole new concept of what education ought to be. And that concept is designed to restructure the educational system to the extent that it is no longer locked into a two-belt conveyor system--one geared to producing "winners" and the other adjusted to turning out "losers."

It is also generally agreed that career education takes place at all levels of education, starting with career awareness and progressing through an exploration of the world of work, decision-making relative to educational needs, and finally preparation for career proficiency. It allows for decisions at various stages, including new decisions in early or mid-career. It also provides for an understanding of the relationship between a career and one's life style.

Yet, it seems that the consensus toward which educators are moving in concept and in rhetoric is sometimes at odds with the reality of what is happening in the field.

There is great concern that career education is being viewed by many in the education community as simply a rehashed working of vocational education--an effort to enhance vocational education, and not as a discipline in its own right which has a sizeable contribution to make to the larger concept of career education.

Most minority groups, especially the poor, are suspicious of career education. They fear it is a design to feed them into service occupations

while middle- and upper-class majority groups are directed into colleges where they can prepare for well-paying jobs. It appears, however, that exposure to alternatives in the world of work, opportunities to get "hands-on" experience from real-world situations, or the chance to explore intellectually demanding careers brings a new dimension to the minority experience. It is believed that the longevity and success of a comprehensive career education program is largely dependent upon the readiness, the acceptance, support, and leadership of key professional personnel.

Despite the variation in the definitions of the term, existing definitions agree upon one common characteristic: Attitude entails an existing predisposition to respond to social objects which, in interaction with situational and other dispositional variables, guide and direct overt behavior of the individual.[1]

Attitudes held by educational leaders are essential factors in comprehensive implementation of career education. The attitudes toward career education of professional personnel who are in key positions serve as major determinants in how they facilitate more effective program planning and development.[2]

At the April 26, 1972, meeting of the Maryland State Board of Education, career education was established as one of the five educational priorities for Maryland, and the MSDE was directed to develop a comprehensive plan to implement the concept.[3]

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[1]Cardino, pp. 345-352.

[2]Taylor, pp. 26-28.

[3]Maryland State Board of Education, Resolution on Career Education (No. 1971-56, October 27, 1971).

Various approaches and activities for career education programs and staff development have been suggested in the State Vocational-Technical Plan and the Career Education Five-Year Action Plan. These provide support for the statewide implementation of career education.

It is hoped that the findings of this study will be of value in identifying attitudes of key personnel which can then be used as clues for designing appropriate staff development, for relevant research projects, and for providing further basis for planning and evaluation activities to ascertain what is accomplished in career education.

If selected groups of key personnel are identified, they can be utilized as facilitating agents to maintain and enhance positive attitudes toward career education priorities, directions, and strategies. In addition, they can provide the leadership necessary to carry out comprehensive implementation of career education in the State of Maryland.

C. Summary of Related Literature and Research

A review of the literature revealed that authors agree on career education as a concept.

Career education has been proposed as an approach to making American education relevant for each student. Worthington, Marland, and Parnell are notable among numerous authors who have stressed the need for educational change to prepare individuals to become effective, contributing, and self-fulfilled members of society.

The literature is replete with suggestions that career education has as its fundamental purpose to establish a relationship between education and work and to make work possible, meaningful and satisfying to the individual. The literature indicates that the following objectives of

career education have been agreed upon:

1. To improve the quality of career choice.
2. To provide opportunities for career entry.
3. To improve individual opportunities for career progression.

Despite the general endorsement of the career education concept, a number of unresolved issues remain. Disagreement between vocational educators and academicians as to the ability of career education to unify education was noted in the literature. Hoyt, Evans, Mackin, and Mangum, as well as Smith and Ottina, express the state of concern and difference in views of vocational and academic leaders as to the need for purposes, content, and philosophy of career education as it relates to and has implications for their respective domains. It would appear that career education introduces a new set of values and requires a new climate of acceptance and support. As Smith says, "There is no room for self-serving dichotomies in education today."

In other words, the literature indicates that societal and educational conditions have necessitated the career education movement. This movement, as a major modification of American education, purports to prepare students more effectively for productive living. Career education as a concept has not been precisely defined; instead local districts are urged to develop their own conceptual consensus and operational definition of the term. It was also interesting to note that career education is not a totally new concept.

Common elements found in the literature, as cited by Cardino and summarized by Shaw and Wright, concerning the nature of attitudes indicated that attitudes are predispositions of an individual to respond to social objects. These predispositions are closely related to the subsequent

behavior of the individual toward that object. Also supported in the literature is the contention that attitudes are measurable and that a Likert-type scale is one effective technique for the assessment of attitudes.

This led the researcher to believe that (1) if one accepts the idea that attitudes are predispositions to respond to social objects and the response is closely related to subsequent behavior, and (2) if one embraces the need for career education to provide relevancy in today's education, then the attitudes of key administrators and supervisors need to be determined. For reforms in education to become effective, the leadership personnel must support their development of concepts to bring about change with healthy attitudes and a willingness to provide leadership. Taylor, Marland, and Keller observed the importance of investigating attitudes toward career education of key educational leadership. It is felt that information concerning these attitudes will be useful in determining how to involve these key administrative-supervisory personnel in the planning, development, and implementation of career education programs.

SECTION II PROCEDURES AND INTERPRETATIONS

A. Statement of the Problem

The purpose of this study was to investigate the attitudes of three groups of key administrative-supervisory personnel in the State of Maryland toward the career education concept. The investigation sought to determine the following:

1. Whether key administrative-supervisory personnel view career education as an important factor in helping to create a unified school system.
2. Whether the philosophy of vocational education should be a more structured view of education or a broader concept of career education as seen from the point of view of the key administrative-supervisory personnel in the public schools of Maryland.
3. The nature of views held by key administrative-supervisory personnel in the State of Maryland toward the proposition that career education should progress from the elementary through the secondary grades.
4. The attitudes held by the key administrative-supervisory personnel about the expansion of vocational education.
5. The views of the key administrative-supervisory personnel toward the content of career education.
6. The views of key administrative-supervisory personnel toward the need for developing career education programs.
7. The attitudes of key administrative-supervisory personnel toward the purposes of career education.

8. The attitudes of key administrative-supervisory personnel toward the implementation of career education in the State of Maryland.

B. Source of Data

Data for this investigation were obtained by surveying key administrative-supervisory personnel in Maryland.

The populations selected for participation in the present study were identified as essential leadership personnel for comprehensive career education program development and implementation. The populations used were identified by the Task Force for Implementation of Career Education and the Division of Research, Evaluation and Information Systems (REIS), which are part of the Maryland State Department of Education (MSDE).

The populations chosen were surveyed because it was felt that they would influence the development and implementation of career education programs.

The populations, consisting of three groups of key administrative-supervisory personnel employed in the 24 local education agencies (LEA's) of Maryland, comprised a total of 288 individuals. Names and addresses were obtained from the State Directory of Public Education 1972-73. The three groups contacted to take part in the present study were from the following populations:

Group I, a total of 108, was selected from central office personnel and consisted of five subgroups: A) 24 school superintendents, B) 14 directors of career education, C) 24 directors of guidance and counseling, D) 24 directors of instruction, and E) 22 directors of vocational education.

In 11 LEA's, certain central office personnel were responsible for more than one of the aforementioned positions; therefore, these individuals were considered a part of each of their respective groups.

Group II consisted of three subgroups of principals located in F) 14 vocational high schools, G) 15 vocational-technical centers, and H) 40 high schools offering five or more approved occupational fields. A total group of 69 principals was selected from area vocational high schools.

Group III was comprised of 111 principals of comprehensive high schools which offered fewer than five approved occupational fields.

C. Review of Procedures

The researcher first obtained approval to conduct this study from the appropriate officials and personnel of the Maryland State Department of Education.

Then an extensive review of the literature related to the problem was conducted, providing information relating to research that has already been done in this area that served as a basis for recommendations for the present study.

The survey instrument chosen from the literature was adapted for the purposes of the present study in cooperation with the appropriate personnel at the George Washington University and the Maryland State Department of Education.

The survey instrument was distributed by mail to the selected key administrative-supervisory personnel. Distribution included a cover letter from the Maryland State Superintendent of Schools explaining the purposes of the survey and instructions for its completion and return.

Two types of data were collected from each respondent: biographical and attitudes toward career education.

Analysis of data, including transcription onto IBM cards and processing at the Computer Center, was carried out through the use of two types of statistical treatment of the research hypotheses. Chi-Square was used to determine whether there was a relationship between selected attitude statements and background variables of the participants. One-way analysis of variance (ANOVA) was used to determine significant differences in attitudes toward career education among the three groups surveyed.

Interpretation of the findings was used as a basis for drawing conclusions and making recommendations.

Implications for future research completed the study.

D. Hypotheses

In order to carry out the purposes of this study the following hypotheses were tested:

1. There will be significant differences among the attitudes of groups I, II, and III concerning the purposes of career education.
2. There will be significant differences among the attitudes of groups I, II, and III concerning the content of career education.
3. There will be significant differences among the attitudes of groups I, II, and III about the proposal which stated that expanded vocational education programs will better meet the needs of Maryland youth.
4. There will be significant differences among the attitudes of groups I, II, and III toward the present vocational education

programs in Maryland schools.

5. There will be significant differences among the attitudes of groups I, II, and III toward the progression of career education in the public schools.
6. There will be significant differences among the attitudes of groups I, II, and III toward the need for developing career education programs.
7. There will be significant differences among the attitudes of groups I, II, and III concerning the idea that career education will provide a unified school.
8. There will be significant differences among the attitudes of groups I, II and III concerning the philosophy of vocational education.
9. There will be significant differences among the attitudes of subgroups A, B, C, D, and E of Group I toward the need for developing career education programs.
10. There will be significant differences among the attitudes of subgroups F, G, and H of Group II toward the need for developing career education programs.
11. There will be a significant relationship between the length of time in service of the respondent and his attitude toward career education providing a unified school.

E. Scope and Limitations

The present study was limited to the 24 local education agencies (LEA's) that comprise the public schools in Maryland. Three populations of selected key administrative-supervisory personnel were surveyed to provide the data.

The attitudes of the three groups selected toward career education were measured by the Likert-type Career Education Attitude Scale. This survey was conducted during August and September of 1973.

F. Basic Assumptions

As a result of a review of the related literature, the following basic assumptions were made in order to carry out the present study:

1. Key administrative-supervisory personnel in the State of Maryland have measurable attitudes toward the concept of career education.
2. The Likert-type Career Education Attitude Scale measures attitudes toward career education.

G. Data Gathering Instrument

The survey instrument used to gather the information concerning the study of attitudes of key administrative-supervisory personnel was a Likert-type scale entitled Career Education Attitude Scale (See Appendix A). The survey instrument was found during the review of a dissertation by Harrison.[1]

Inasmuch as the Texas study by Harrison dealt with similar purposes and objectives, it was decided after consultation with REIS and the dissertation committee, that the scale developed to measure attitudes for the Texas study was applicable to the present study, with certain minor adaptations.

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[1]Denist, Harrison, "A Study of Attitudes Held by Superintendents, and Principals Toward Career Education in Texas," Unpublished Doctoral Dissertation, North Texas State University, Denton, Texas, rav 1972.

For the construction of the attitude scale in the Texas study, an item pool was developed, edited, and presented to a panel of jurors to establish the face and content validity of the items. The split-half or odd-even technique was used to establish reliability.

By using the Pearson Product-Moment Correlation Coefficient, the value of r was found to be .73, indicating that r was significant at the .005 level.

The Spearman-Brown prophecy formula for the split-half technique was then applied and the coefficient of correlation for the total instrument was equal to .84; r was significant at the .01 level.[1]

Those individuals who reviewed the instrument included the Assistant State Superintendent of Vocational-Technical Education, Assistant State Superintendent for REIS, the Chairman of the Career Education Task Force, and the Specialist in the MSDE Publications, as well as the Associate State Superintendent of the Bureau of Educational Programs. The use of this instrument was approved by the State Superintendent of schools for this State survey. As a result of their recommendations, the instrument was modified to meet the needs of the present study and was submitted to the investigator's dissertation committee. Following the dissertation committee's review and suggestions, the instrument was adopted in its final form.

Part A of the Career Education Attitude Scale dealth with the descriptive data about the respondent.

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[1]John Roscoe, Fundamental Research Statistics (Dallas, Texas: Holt, Rinehart and Winston, Inc., 1969).

Seven items were presented, six calling for biographical information to gain background about the respondent, and one item asking for an opinion concerning where career education should begin in the schools.

Part B of the instrument contained the attitudinal items concerning career education and issues concerning career education. Survey items were related to the hypotheses of the present study presented in Chapter I of this dissertation. The clusters of items were related to the hypotheses as follows:

Hypothesis I - The purpose of career education - Items 17, 22, and 26.

Hypothesis II - The content of career education - Items 5, 14, 15, 19, 24 and 28.

Hypothesis III - The expansion of vocational education - Items 7, 8, 20, and 23.

Hypothesis IV - The present vocational education programs in Maryland-Items 1, 3, 4, 6, 16 and 29.

Hypothesis V - The progression of career education in the public schools - Items 9, 10, 11, 12 and 13.

Hypothesis VI - The need for developing career education programs - Items 2, 25 and 30.

Hypothesis VII - Career education providing a unified school - Item 21.

Hypothesis VIII - The philosophy of vocational education - Items 18 and 27.

Hypothesis IX - The need for developing career education programs - Items 2, 25 and 30.

Hypothesis X - The need for developing career education programs - Items 2, 25 and 30.

Hypothesis XI - The relationship between length of time in service and attitudes toward career education providing a unified school - Item 2, Part A and Item 21, Part B.

The attitudes of the respondents were revealed by their responses to each of the statements on the attitude scale in Part B of the instrument. Seven possible reactions to each of the statements were presented: strongly agree, agree, moderately agree, undecided, moderately disagree, disagree, and strongly disagree. A numerical value ranging from one for strongly agree to seven for strongly disagree was assigned to each of the positions.

H. Distribution and Follow-up

Approval to carry out the present study was obtained from all key personnel of the MSDE. The survey instrument, an accompanying letter of explanation by the State Superintendent of Schools, and a self-addressed stamped envelope were mailed to a total of 305 participants that comprised the aforementioned designated groups in Maryland during August and September of 1973. Follow-up reminders were mailed to those individuals who did not respond within a two-week period. Telephone calls were made after another two weeks in order to obtain all questionnaires.

I. Processing the Data

Data were collected, recorded on IBM data forms, transferred to IBM punch cards, and analyzed. All data were treated as confidential.

In summary, 69 percent of the questionnaires were returned within two weeks. Follow-up notices were sent. Recording of the data then revealed that 288 (94.43%) of the 305 survey instruments were returned and usable. One hundred-eight (99.08%) of 109 central office personnel responded.

One hundred eighty of 196 or 91.84 percent of the high school principals responded.

After the follow-up returns were in, the data were tabulated and statistical treatment was applied to test the research hypotheses. The research hypotheses of the present study were related to the items on the Career Education Attitude Scale in Part B of the instrument.

Part A of the instrument was concerned with background information on the respondent. Results were tabulated and summarized in terms of percentages and used as bibliographical data and to test hypothesis Number XI.

The significance of relationship between selected variables from Item 2 Part A and Items 5, 14, 19, 24, and 28 on the attitude scale in Part B were examined.

The hypothesis of the significance of relationship (Number XI) was tested by applying the Chi-Square Test for a two-way contingency table.

The level of significance for the statistical test to be used was .05.

Part B of the instrument was concerned with attitudes toward career education. The mean attitude scores of the three responding groups (I, II, and III) and subgroups A-E and F-H were tested for differences by applying one-way ANOVA to the data on all of the items relating to the hypotheses.

The level of significance for the statistical test used was .05.

J. Presentation and Analysis of the Data

The data were presented and analyzed in the following four categories:

1. Treatment of data.
2. Presentation of biographical data from Part A of the Career Education Attitude Scale.

3. Analysis of the data from Part B of the Career Education Attitude Scale.

4. Testing of hypotheses.

Most of the data collected were treated statistically and were related to the purposes and research hypotheses of the present investigation. Other biographical data were collected and presented without statistical treatment.

Table 1 indicates that 288, or 94.43 percent of the 305 survey instruments sent, were returned. A further examination of the table reveals that 108, or 99.08 percent of 109 sent, were returned by the central office personnel in Group I.

Twenty-four questionnaires were sent to the school superintendents and 100 percent were returned. One hundred percent of the 14 questionnaires sent to career education directors were also returned. Guidance directors returned 100 percent of the 24 questionnaires sent to them, directors of instruction returned 100 percent of the 24 questionnaires sent, and 22, or 95.65 percent of the 23 questionnaires sent to vocational educational directors, were returned.

Sixty-nine questionnaires were mailed to principals of area vocational high schools and 100 percent were returned. The response rates for the subgroups of Group II were 100 percent returned of 14 sent to vocational high schools, 100 percent returned of 15 sent to vocational centers, and 100 percent returned of 40 sent to high schools offering five or more occupational fields.

Group III which consists of high schools offering fewer than five occupational fields returned 111, or 87.40 percent of 127 questionnaires, sent to these principals.

J. 1. Treatment of the Data

After the data were collected, they were tabulated and a statistical analysis was applied to test the research hypotheses. The data were processed at the George Washington University and the University of Maryland Computer Centers. Various statistical tests were applied which are discussed later in this study.

The research hypotheses were restated in the null form to be tested statistically. These hypotheses then could be tested and, on the basis of this test, either accepted or rejected.

To test the research hypothesis of significant difference, the one-way analysis of variance (ANOVA) was used. The level of significance of the test was .05. All of the research hypotheses were related to the Career Education Attitude Scale used in this study.

There were three groups of key administrative-supervisory personnel used for gathering data in the present study. One-way ANOVA was used as a test of significance of differences between the mean scores of the three responding groups.

The following formula was used to calculate this statistic:

$$F = \frac{MS_{bg}}{MS_{wg}}$$

MS_{bg} = mean squares between groups

MS_{wg} = mean squares within groups

F = statistic used to determine significance of the test.

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[1]Henry Garrett, Statistics in Psychology and Education (New York: David McKay Company, Inc., 1966), pp. 253-254.

Critical values of the F table were obtained from those presented by Guilford.[1]

Part A of the survey instrument was concerned with biographical information on the respondents. Item 2 in Part A was subject to statistical treatment and was related to research Hypothesis II.

The Chi-Square test for a two way (three by three) contingency table was used to test the significance of the relationship in this hypothesis.

The following formula was used to calculate this statistic:

$$x^2 = \sum_{i=1}^{3} \sum_{j-1}^{3} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

O_{ij} = number of cases observed in the i^{th} row and the j^{th} column

E_{ij} = number of cases expected in the i^{th} row and the j^{th} column

$i = 1,2,3$ $\qquad$ $j = 1,2,3$

Critical values of the Chi-Square Table were obtained from those presented by Guilford.[2]

J. 2. Presentation of Biographical Data from Part A of the Career Education Attitude Scale

Table 2, presents biographical information about the populations involved in this investigation. The data in Table 2 were drawn from survey items 1 through 7 contained in Part A of the survey instrument.

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[1] J.P. Guilford, Fundamental Statistics in Psychology (New York: McGraw-Hill Book Company, 1965), pp. 583-587.

[2] Guilford, p. 582.

J. 3. Analysis of the Data from Part B of the Career Education Attitude Scale

The attitude scale in Part B of the instrument contained 30 items about vocational education and career education. These were statements related to the purposes and hypotheses of the study. The data related to specific areas stated in the purposes and hypotheses are presented.

The attitudes of the key administrative-supervisory personnel were revealed by their responses to each of the statements. These reactions range from "strongly agree" to "strongly disagree." A numerical value beginning with 1 for "strongly agree" to 7 for "strongly disagree" was assigned to each of the positions. If the mean score for a particular group on any statement was below 3, the respondents of that group were considered to hold positive attitudes toward that particular statement. If the mean score was above 5, the respondents of that group were considered to hold negative attitudes toward that statement. If the mean score was between 3 and 5, the respondents were considered to show insufficient evidence to conclude that their attitudes were either positive or negative.

Responses to the statements in Part B are summarized in Tables 3-10.

J. 4. Testing of Hypotheses

The research hypotheses were tested by statistical analysis techniques. Each hypothesis was accepted or rejected at the .05 level of significance. The Bio-medical Computer Program for the Analysis of Variance for One-way Design developed by the Health Science Computing Facility at University of California at Los Angeles was used to determine whether there were significant differences among the attitudes of Groups I, II and III and among the various subgroups within Groups I and II.

Where the F ratio was found significant at the .05 level, indicating significant differences between the attitudes of the groups or subgroups, Sheff'e's[1] S-Method was used to test the differences between the means in pairs.

The Statistical Analysis System developed in the Department of Statistics at North Carolina State University was used to calculate Chi-Square for a two-way contingency table which was used to determine if there were any significant relationships between the attitudes of the respondents as indicated on Part B of the survey instrument and selected variables from biographical data on Part A of the survey instrument.

At the .05 level of significance, the critical value of an F Test with 2 and 285 degrees of freedom is 3.02. Significant differences are found for any F ratios exceeding that critical value.

Hypothesis I

Hypothesis I was restated in the null form as follows: There were no significant differences among the attitudes of Group I, II, and III concerning the purposes of career education. Subsequent items on the survey instrument were related to Hypothesis I. Item 17, "The main purpose of career education is to help the minority groups," Item 22, "Career education should involve both students who enter the world of work immediately after high school and students who enter post high school education" and Item 26, "Career education is primarily for students who are likely to become unskilled or semi-skilled workers." ANOVA was used to test this hypothesis.

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[1]Henry Sheff'e, The Analysis of Variance (New York: John Wiley and Sons, Inc. 1959), pp. 109-112.

The F ratio obtained indicated the differences among the attitudes of Groups I, II and III toward Item 17 was not significant at the .05 level. Tables 4 to 10 presented data on each questionnaire item related to the hypotheses. The tables included a summary of the respondents' mean scores, standard deviation, and reaction to questionnaire items. The mean scores of the attitudes of the three groups were negative. Item 22 was related to Hypothesis I.

On Item 22, the mean scores of Groups I, II and III indicated positive attitudes and no significant differences between them.

The null hypothesis as stated was not rejected on the basis of the statistical evidence presented in the related tables. This finding suggested that the three groups of key administrative-supervisory personnel held similar views concerning the purposes of career education. The negative responses to Item 17 and 26 presumably reinforce their viewpoints that career education should involve all students rather than focusing primarily on certain special populations such as minorities and the unskilled.

Hypothesis II

Hypothesis II was restated in the null form as follows: There were no significant differences among the attitudes of Groups I, II and III concerning the content of career education. The following items were related to Hypothesis II: Item 5, "Career education should provide skill, information and help in developing attitudes about the personal, social, and economic significance of work; Item 14, "In the exploration of occupations, first-hand experience, field trips, and classroom instruction would best help the student gain

insight into various occupations;" Item 15, "Subject matter may be enhanced by including the career implications of that subject-matter;" Item 19, "Career education should involve all grade levels of students, should cover the entire range of careers unskilled, skilled, technical, and professional. It should involve all the disciplines in education. Item 24, "All education in the public schools should be career education;" and Item 28, "Hands on" experiences are essential to a good career education program."

No significant differences were found among the attitudes of Groups I, II and III toward Item 5. All of the groups' attitudes were positive toward this item.

An analysis of the data indicates that there were no significant differences among the attitudes of Groups I, II and III toward Item 14. The mean scores for the three groups revealed positive responses toward this item.

There were no significant differences among the attitudes of the key administrative-supervisory personnel toward Item 15. The three groups viewed this item positively.

Item 19 was related to Hypothesis II. Results of the analysis of the data show that no significant differences exist among the attitudes of Groups I, II and III toward Item 19. A positive attitude toward this item was indicated by each of the groups.

There were no significant differences found among the attitudes of Groups I, II and III concerning Item 24. There was not enough evidence from the mean scores of the respondents to conclude whether their attitudes were positive or negative toward this item.

The findings indicated that there were no significant differences among the attitudes of Groups I, II and III toward Item 28. Each of the groups of respondents viewed this item positively.

The F ratios were not significant for any item related to Hypothesis II; therefore, the null hypothesis as stated was not rejected. The groups were found to be in positive agreement about the content of career education. Key administrative-supervisory personnel indicated in Item 24 that they were not certain whether all education should be career education. Even though these personnel may support key elements to be involved in career education, it is presumable that respondents could not agree as to the true meaning of "all education."

Hypothesis III

Hypothesis III, restated in the null form, is as follows: There were no significant differences between the attitudes of Groups I, II and III about the proposal that expanded vocational education programs will better meet the needs of Maryland Youth.

Items: 7, "The present vocational educational programs in the public schools should be expanded;" 8, "Expanding the present vocational education programs will not change their effectiveness in aiding students to gain successful employment;" 20, "There are not enough students involved in the present vocational programs in the public schools;" and 23, "The public schools of Maryland do not offer enough students the opportunity to gain skills needed to enter the world of work," were tested by ANOVA.

The results indicated that there were no differences among the attitudes of Groups I, II and III toward Item 7. The mean scores revealed that the three groups had positive attitudes toward this item.

Item 8 was related to Hypothesis III and treated with ANOVA. It was found that no significant differences existed between the attitudes of the three groups of key administrative-supervisory personnel toward Item 8. Their mean scores for this item were insufficient to conclude whether they felt positively or negatively about this item.

The attitudes between Groups I, II and III were not found to be significantly different toward Item 20. Positive attitudes toward that item were indicated by the responses of the three groups.

There were no significant differences among the attitudes of key administrative-supervisory personnel toward Item 23. Groups I, II and III all held positive attitudes toward that item.

An analysis of the data in the tables related to Hypothesis III indicated that no significant differences were found among the attitudes of Groups I, II and III toward the related items.

The F ratios did not exceed the critical value for the .05 level of significance and therefore the null hypothesis was not rejected. The acceptance of null Hypothesis III suggested that the three groups had nearly equivalent views about the proposal that expanded vocational education programs will better meet the needs of Maryland Youth. The groups indicated positive agreement toward the need for expanding vocational programs. However, the data suggests that the attitudes of key administrative-supervisory personnel are not conclusive about the predictability of such expansion being effective.

Hypothesis IV

The null hypothesis stated that there were no significant differences between the attitudes of Groups I, II and III toward the present vocational education programs in Maryland.

Data were obtained by applying ANOVA to the responses to items:

1 - "Schools should place greater emphasis on helping to prepare students for employment after high school."

3 - "Most vocational education programs offered by the public schools are in need of modification."

4 - "The vocational programs in Marvland public schools benefit enough students to justify the cost."

6 - "Career education has no significant part to play in the public schools of Maryland."

16 - "Students have not been provided with career exploration early enough in their educational development."

29 - "Career education is synonymous with vocational education."

An analysis of the data indicated that there were no significant differences among the attitudes of Groups I, II and III toward Item 1. Positive attitudes were indicated by the mean scores of the three groups toward this item.

For Groups I, II, and III to have significant differences among their attitudes toward Item 3, the computed F ratio would have to exceed 3.02. An F ratio of 3.1886 indicated there were significant differences at the .05 level among the attitudes of the three groups toward this item. Groups I and III have significantly different mean scores for Item 3 as shown by Sheff'e's[1] S-Method. Group III

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[1]Sheff'e, pp. 110.

shows positive attitudes toward Item 3, and Group I's attitudes reveal insufficient evidence to conclude if they felt positively or negatively about most vocational education programs in the public schools being in need of modification. Groups II and III had significantly different means for Item 4. The attitude scores for Group II were more positive toward this item.

An F ratio of 3.2208 was computed and found significant at the .05 level. This indicated that there were significant differences among the attitudes of Groups I, II and III toward Item 4. Group II held more positive attitudes toward Item 4 as indicated by their mean scores than did Group III.

The F ratio obtained for Item 6 indicated no significant differences among the attitudes of Groups I, II and III since they were not significant at the .05 level. For Item 6, the mean scores revealed negative attitudes held by the three groups.

There were no significant differences among the attitudes of Groups I, II and III toward Item 16. The three groups all had positive views toward this item.

Analysis of the data revealed negative attitudes that were significantly different among the three groups of key administrative-supervisory personnel. Significant differences were found among the attitudes of Groups I, II and III toward Items 3 and 4. An analysis of the data on these items indicated the null hypothesis should be rejected. However, the null hypothesis was not rejected for Items 1, 6, 16 and 29.

These findings indicated that Group III, comprehensive high school principals, held more positive views toward the need for the modification of vocational education programs in the public schools. Group II, principals of area vocational high schools felt more strongly that the benefits of vocational programs in Maryland schools justify the costs. It might be generally expected that principals of area vocational high schools would have more positive attitudes toward this viewpoint.

The three groups were in close agreement concerning the present vocational education programs in Maryland. They agreed upon the need to prepare students for successful entry into the world of work after high school. They all agreed that career education has not been provided for early enough, that career education would play an important role in the public schools of Maryland, and it is not just another name for vocational education.

Hypothesis V

Hypothesis V as restated for statistical purposes was stated that there were no significant differences among the attitudes of Groups I, II and III toward the progression of career education in the public schools.

Data were compiled from applying ANOVA to Items:

9 - "The junior high-middle school should assist the students in identifying specific career areas for which they may be prepared in high school."

10 - "Career education should involve all levels of education from kindergarten through the twelfth grade."

11 - "The junior high-middle school should promote exploratory experience for students through career education."

12 - "The high school should promote exploratory experiences in students through career education."

13 - "Career education in the junior high school should involve the exploration of specific clusters of occupations."

An F ratio of 0.2509 indicated there were no significant differences among the attitudes of Groups I, II and III toward Item 9. The mean scores for the three groups revealed positive views toward this item.

Item 10 was related to Hypothesis V.

For the three groups to have had significantly different attitudes toward Item 10 at the .05 level, the F ratio would have to be 3.02. An F ratio of 5.5741 indicated significant differences among the attitudes of Groups I, II and III toward this item. The attitudes were positive for all three of the groups. Groups I and III had significantly different mean scores. Sheffe'e's S-Method shows the mean scores for Group I were more positive than Group III.

There were no significant differences among the attitudes of Groups I, II and III toward Item 11. For Item 11, positive mean scores for each of the groups were noted.

Item 12 was also subjected to ANOVA. On Item 12 an F ratio of 3.0428 was computed and found significant at the .05 level. Thus, significant differences were indicated between the attitudes of Groups I, II and III toward the item. The mean scores for the attitudes of the three groups were positive. Even though there

was a significant F ratio, Sheff'e's S-Method indicates that no mean scores taken two at a time were significantly different for Item 12.

There were no significant differences among the attitudes of Groups I, II and III toward Item 13. All three of the groups held positive views concerning the item.

The F ratios for Items 10 and 12 were significant at the .05 level. Therefore, the null hypothesis was rejected for these items. The F ratios for Items 9, 11, and 13 were not significant at the .05 level; thus the null hypothesis was not rejected for these items. The rejection of the null hypothesis for Item 10 indicated that significant differences existed between the attitudes of Groups I, II and III toward all levels of education from kindergarten to twelfth grade being involved in career education. The attitudes of Group I were the most positive for Item 10.

The rejection of the null hypothesis for Item 12 indicated that there were significant differences among the attitudes of the three groups that the high school should promote exploratory experiences in students through career education.

For Item 12 no significant differences were found between the pairs of group means when tested statistically.

The null hypothesis was not rejected for Items 9, 11, and 13. This indicated that the three groups of key administrative-supervisory personnel held similar attitudes about cluster selections of careers being offered in junior high school in order that students could identify and plan to prepare for these areas in high school. It

was felt that junior high-middle school should promote career exploration in specific clusters through career education programs.

Hypothesis VI

Null Hypothesis VI stated that there were no significant differences among the attitudes of Groups I, II and III toward the need for developing career education programs. ANOVA was applied to the following items:

2 - "Public schools have not helped in giving sufficient orientation about occupational choices to students."

25 - "A new curriculum organized around the concept of career education should be developed in the school system of Maryland."

30 - "Traditional subject-matter should be revised in order to include the career implications of the subject."

For Item 2 there were no significant differences between the attitudes of Groups I, II and III. The mean scores of the three groups indicated insufficient evidence to conclude whether the attitudes were either positive or negative toward Item 2.

The F ratio for Item 25 was found to be nonsignificant. Groups I, II and III revealed attitudes that were neither positive nor negative toward this item.

On Item 30, the attitudes of the three groups were positive, and there were no significant differences among the attitudes of the groups.

The null hypothesis was not rejected on the basis of the statistical evidence presented in the related tables. These findings

suggested that the key administrative-supervisory personnel agree similarly in their attitudes, but were indeterminate in their opinions about whether the orientation about choices being given to students in the public schools has been sufficient. They were also indeterminate as to whether there is a need to develop a new career education curriculum in the schools of Maryland. This attitude could be related to an earlier indeterminate opinion toward Item 24, of Hypothesis II, "All education in the public schools should be career education." These key personnel could view career education as a concept which might strengthen and unify already existing programs, rather than replacing certain programs or totally revamping the school system. This notion may be further advanced by the groups' positive agreement that traditional subject-matter should be revised in order to include the career implications for that subject.

Hypothesis VII

Item 21, "The career education concept could unify the academic and vocational approaches to education," was related to Hypothesis VII. The null hypothesis stated that there were no significant differences concerning the idea that career education will provide a unified school. ANOVA was used to test this hypothesis.

The F ratio required for significance of differences among the attitudes of Groups I, II and III was not obtained. Since the F ratio was not significant at the .05 level, the null hypothesis was not rejected. The three groups were in positive agreement toward Item 21.

Hypothesis VIII

Hypothesis VIII in the null form stated that there are no significant differences between the attitudes of Groups I, II and III concerning the philosophy of vocational education.

ANOVA was applied to the data of Items: 18, "The present philosophy of vocational education should be expanded to the broader concept of career education" and 27, "Vocational education should concentrate on students in specific vocational program areas only.

No significant differences were found among the attitudes of Groups I, II and III toward Item 18. The mean scores of each revealed that the key administrative-supervisory personnel held positive views toward this item.

The analysis of the data indicated that there were no significant differences between the attitudes of Groups I, II and III toward Item 27. There were negative attitudes toward Item 27, as indicated by the mean scores of the respondents. The null hypothesis was not rejected for Items 18 and 27 on the basis of the results of the statistical analysis applied to the data. The findings indicated that three groups are closely equivalent in their opinions concerning the philosophy of vocational education. The groups agree positively that the present philosophy of vocational education needs to be changed to a broader concept of career education.

Hypothesis IX

Hypothesis IX, in the null form, stated that there were no significant differences among the attitudes of subgroups A, B, C, D and E of Group I toward the need for developing career education programs. The content of the related items: 2, 25 and 30 were presented previously.

At the .05 level of significance the critical value of an F test with 4 and 103 degrees of freedom is 2.46. Significant differences are found for any F ratios exceeding that critical value.

An F ratio of 4.0038 was computed for Item 2 and found significant at the .05 level.

There were significant differences among the attitudes of subgroups A, B, C, D and E of Group I toward the item.

Subgroups A and E had significantly different mean scores toward Item 2 as shown by Sheff'e's S-Method. Subgroup E had positive attitudes toward this item and Subgroup A's mean scores indicated insufficient evidence to conclude whether the attitudes were positive or negative for this item. It should be noted that only subgroups with positive attitudes are career education, guidance, and vocational education directors. Their viewpoints may be directly the result of the nature and responsibilities of their positions as related to career education in the public schools.

There were no significant differences among the attitudes of subgroups A, B, C, D and E of Group I toward Item 25. The mean scores of all of the subgroups were not sufficient to conclude whether their attitudes toward Item 25 were positive or negative.

The F ratio required for significance of differences among the attitudes of subgroups A, B, C, D and E of Group I was not obtained for Item 30. The subgroups were all in positive agreement with this item.

The null hypothesis was rejected for Item 2. Hence, there were significant differences among the attitudes of subgroups A, B, C, D

and E toward this item. Subgroup E had the most positive attitudes toward this item and Subgroup A's attitudes scores were non-conclusive.

For Items 25 and 30 the null hypothesis was not rejected. In other words, there were no significant differences among the attitudes of the 5 subgroups toward these items. The significant differences existed between Subgroups A and E.

Hypothesis X

Items: 2, 25 and 30, previously cited as related to Hypothesis IX, are also related to Hypothesis X. The null hypothesis stated that there were no significant differences among the attitudes of subgroups F, G, and H of Group II toward the need for developing career education programs.

At the .05 level of significance the critical value of an F test with 2 and 66 degrees of freedom is 3.15. Significant differences are found for any F ratios exceeding that critical value.

The F ratio required for significance of differences among the attitudes of subgroups F, G and H of Group I toward Item 2 was not obtained. Since the F ration was not significant at the .05 level there were no significant differences among the attitudes of these subgroups toward this item. The mean scores of the attitudes of the three subgroups revealed insufficient evidence to conclude either positive or negative attitudes for Item 2.

There were no significant differences among the attitudes of subgroups F, G and H of Group I toward Item 25. The mean scores of the attitudes of each of the subgroups were not sufficient to conclude whether their attitudes were positive or negative for the item.

The F ratio was not significant at the .05 level for this item. Thus, there were no significant differences among the attitudes of the subgroups of Group I toward this item. The subgroups were in positive agreement toward Item 30 as indicated by their mean scores.

The null hypothesis was not rejected for Items 2, 25 and 30 on the basis of the results of the F ratio. Therefore, there were no significant differences among the attitudes of subgroups F, G and H of Group I toward the need for developing career education programs. This indicated similarity among the views of the five subgroups toward this hypothesis. It was noted, however, that the subgroups were indecisive in their feeling about whether the public schools are providing sufficient orientation for the students about occupational choices.

Furthermore, they are not conclusive in their attitudes about the need for developing a new curriculum for career education. This reinforces the earlier discussion for Hypothesis VI concerning the same type of views that were held by Group II. That discussion dealt with the nonconclusiveness as to whether career education sould replace existing programs or would serve to revise, unify, and strengthen these educational programs.

Hypothesis XI

Hypothesis XI was restated in the null form as follows: There is no significant relationship between the length of time in service of the respondent and his attitude toward career education providing a unified school.

Item 21, "The career education concept could unify the academic and vocational approaches to education," contained in Part B of the survey instrument and Item 2 of Part A of the instrument, "How many years have you been in your present position?" are related to Hypothesis XI.

This hypothesis was tested by applying the Chi-Square Test for a two-way (three by three) contingency table. Table 11 presents a summary of the results of the Chi-Square Test.

The critical value at the .05 level of significance for a Chi-Square Test with 4 degrees of freedom is 9.488. Significant relationships are found for any Chi-Square value exceeding that critical value.

A Chi-Square value of 7.42444 was computed for this table. The Chi-Square value required for significance at the .05 level was not obtained. Since the computed Chi-Square value was not significant, the null hypothesis was not rejected. Therefore, there was no significant relationship between the length of time in service of the respondent and his attitude toward career education providing a unified school.

The length of time in service was not a factor in the attitudes of the respondents toward the idea that the career education concept could unify the academic and vocational approaches to education. The finding was interesting to note, because in education it is generally felt that certain individuals may tend to be more or less pro or con relative to their tenure regarding their attitudes toward innovations and restructuring proposals.

SECTION III FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

A. Review of the Findings

As a result of an analysis of the data from items related to the research hypotheses, the following results were found:

1. (a) There were no significant differences among the attitudes of Group I, comprised of selected central office personnel, Group II, comprised of Area Vocational High School Principals and Group III, principals of comprehensive high schools which offer fewer than five approved occupational programs concerning the purposes of career education. Therefore, Hypothesis I was not confirmed.

   (b) The three groups had positive attitudes about involving all students in career education, rather than its being a program whose primary purposes were geared for special populations, such as minorities and those likely to become unskilled workers.

2. (a) There were no significant differences among the three groups of key administrative-supervisory personnel concerning the content of career education. Thus, Hypothesis II was not confirmed.

   (b) The attitudes of the three groups were non-conclusive as to whether all education should be career education. However, they did support several key elements to be involved in career education. It was felt that occupational exploration is needed. All subject matter should include career implications. All grade levels, disciplines, and ranges of careers should be involved.

3. (a) The three groups of key administrative-supervisory personnel were found to show no significant differences among their attitudes about the proposal that expanded vocational education programs will better meet the needs of Maryland Youth; thus not confirming Hypothesis III. Groups I, II and III agreed positively that present vocational education programs are in need of expansion for more effectiveness. There was agreement that not enough students are involved in vocational education to gain skills needed for employment.

(b) However, there was not enough evidence to conclude whether the groups felt that expanded vocational programs would indeed enhance the successful employment of its students.

4. (a) There were significant differences found among the attitudes of Groups I, II and III toward Items 3, "Most vocational education programs offered by the public schools are in need of modification" and 4, "The vocational education programs in Maryland public schools benefit enough students to justify the cost." Hypothesis IV was confirmed for Items 3 and 4.

(b) Group III had the most positive attitudes between the groups, and Group I's attitudes were non-conclusive for Item 3. Group II and III had significantly different means for Item 4. This indicated the attitudes of Group II were more positive toward this item.

(c) With the exception of Items 3 and 4, there were no significant differences found among Groups I, II and III toward the present vocational education programs in Maryland, thereby

not confirming Hypothesis IV.

(d) It was agreed upon that schools should place more emphasis on preparing students for employment. The key administrative-supervisory personnel felt the need for early exploratory vocational experiences through career education. Career education was not regarded as synonymous with vocational education or in other words, "just another name for vocational education."

5. (a) No significant differences were found among the attitudes of Groups I, II and III toward the progression of career education in the public schools, not confirming Hypothesis V. Significant differences were found among the attitudes of the groups for Items 10 and 12. Hypothesis V was confirmed for these two items.

(b) The three groups held favorable views about students identifying and selecting from a cluster of career areas in junior high school.

(c) There were significant differences found among the attitudes of Groups I, II and III toward Items 10, "Career education should involve all levels of education from kindergarten through the twelfth grade" and 12, "The high school should promote exploratory experiences in students through career education." Group I had more positive attitudes than any of the groups toward Item 10. Though there was significant F ratio, no significant differences were found when the group means were contrasted statistically for Item 12.

6. (a) No significant differences were found among the attitudes of the three groups of key administrative-supervisory personnel toward the need for developing career education programs. Therefore, Hypothesis VI was not confirmed.

   (b) The groups did not indicate strongly enough in a positive or negative direction their opinions about the adequacy of the occupational orientation being provided to students in the public schools. Their attitudes toward the need to develop a new curriculum of career education were diverse, as well. They did agree, however, that the traditional subject-matter should be revised in order to include the career implications of that subject.

7. (a) The three groups of key administrative-supervisory personnel were found to show no significant differences among their attitudes concerning the idea that career education will provide a unified school. Thus, Hypothesis VII was not confirmed.

   (b) There was favorable agreement among the three groups that the concept of career education could serve to bring together the approaches of academic and vocational education in the public schools. This finding suggests that since it is felt that vocational education and academic education are in need of modification for more effectiveness in preparing students for work, key administrative-supervisory personnel view career education as a concept which could unite the approaches of these two disciplines to maximize their effectiveness.

8. (a) There were no significant differences found among the attitudes of Groups I, II and III concerning the philosophy of vocational

education. Hence, Hypothesis VIII was not confirmed.

(b) The three groups agreed that vocational education should not have a philosophy that concentrates on students in specific programs; rather vocational education should be expanded to the broader concept of career education.

9. (a) There were significant differences found among the attitudes of subgroups (A) school superintendents and directors of (B) career education, (C) guidance (D) instruction (E) vocational education of Group I toward Item 2, "Public schools have not helped in giving sufficient orientation about occupational choices to students." Therefore, Hypothesis IX was confirmed for Item 2.

(b) Subgroup E held the most positive attitudes toward this item and the attitudes of Subgroup A were non-conclusive.

(c) There were no significant differences among the attitudes of Subgroups A, B, C, D and E of Group I toward the need for developing career education programs. With the exception of Item 2, Hypothesis IX was not confirmed.

(d) The attitudes of the subgroups toward whether they felt there was a need for developing a new program of career education were non-conclusive.

(e) Each subgroup of the central office personnel group agreed that traditional subject matter should be revised to include the career implications of that subject.

10. (a) Subgroups in Group II which consisted of (F) principals of vocational education high schools, (G) principals of vocational-technical centers and (H) principals of comprehensive high

schools offering five or more occupational fields were found to show no significant differences among their attitudes toward the need for developing career education programs. Hypothesis X was, therefore, not confirmed.

(b) The views of the three subgroups were inconclusive about the sufficiency of orientation offered for students about occupational choices and also about the need for developing new programs of career education. They were positive, however, about the need for subject matter to be revised in order to include the career implications of that subject.

11. (a) There was no significant relationship between the length of time in service and the attitudes of the key administrative-supervisory personnel toward career education providing a unified school. Hence, Hypothesis XI was not confirmed.

(b) The respondents' length of time in service was not a factor in their attitudes toward the idea of career education bringing together the approaches of academic and vocational education.

B. Conclusions

On the basis of the findings, the following conclusions seem justified, as indicated by the attitudes toward career education of key administrative-supervisory personnel in Maryland:

1. Key administrative-supervisory personnel agreed that career education could unify the approaches of vocational and academic education in Maryland Public Schools. The length of time in service of these personnel did not influence their views toward the idea that career education would unify the schools.

2. Key administrative-supervisory personnel agreed that career education should involve the development of work attitudes and skills, occupational exploration, and subject-matter which includes its career implications. All of the grade levels, disciplines, and the entire range of careers should be included.

3. Central office personnel had more positive views about the progression of career education from kindergarten through grade twelve. Key administrative-supervisory personnel agreed that career education would provide exploratory experiences. In addition, they favorably supported career exploration at the junior high school level, wherein students could identify and explore clusters of careers.

4. Principals of comprehensive high schools agreed more strongly than area vocational high school principals that most of the vocational education programs are in need of modification, whereas the views of central office personnel about the need for modification were inconclusive. Area vocational high school principals felt more positively than central office personnel and comprehensive high school principals that the benefits of vocational education for students have justified its cost.

   Key administrative personnel agreed that there is need to increase students' early exploratory experiences. They felt that career education has a significant part to play in the public schools, and that it is not just a synonym for vocational education.

5. Key administrative-supervisory personnel held favorable views concerning the changing of the philosophy of vocational education to a broader concept of career education rather than a more

structured philosophy that concentrates on students in specific programs.

6. Career education, guidance, and vocational directors viewed occupational orientation in the public schools as insufficient. The attitudes of other key administrative-supervisory personnel were inconclusive regarding this viewpoint. Key administrative-supervisory personnel were inconclusive about the need for a new career education curriculum to be developed for the public schools. It was preferred by these personnel that traditional subject matter be revised and the career implications of the subject be incorporated.

7. Key administrative-supervisory personnel supported the premise that career education should involve all students, whether college-bound or employment-oriented. It was felt that career education should be available for students without regard to ethnic background, abilities, and career goals.

8. Key administrative-supervisory personnel will accept and support the implementation of the career education concept. Career education will be accepted as an approach to strengthening and unifying academic and vocational programs. Career education was viewed as a concept which will enable all students to gain employment successfully or enter college upon completion of school.

C. Recommendations

In light of the findings and conclusions of this study, the following recommendations are made:

1. That the findings of this study should be shared with the key administrative-supervisory personnel in the State of Maryland.

2. That the findings of this study should be used as guidelines by the Career Education Task Force for designing staff and program development activities in Maryland.
3. That this study should be used to provide baseline data for research and development and evaluation projects in Maryland.
4. That the findings of this study should be used to develop research to investigate attitudes toward career education held by students, teachers, elementary school principals, parents, employers, employees, and concerned community agencies.
5. That additional assessment techniques should be developed to determine views in areas where the present study yielded inconclusive results.
6. That the Maryland State Department of Education should increase its efforts in assisting the local education agencies with comprehensive implementation of career education.
7. That local education agencies should develop and maintain professional development activities in career education for all levels of educators.
8. That local education agencies should revise their curricular offerings in light of career education for all grade levels, disciplines, and students.

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APPENDIX A

CAREER ATTITUDE SCALE-SURVEY INSTRUMENT

A STUDY OF ATTITUDES TOWARD
CAREER EDUCATION OF KEY ADMINISTRATIVE-
SUPERVISORY PERSONNEL IN THE
STATE OF MARYLAND

Career Education represents the coordinated efforts of education and the community to familiarize, prepare, and assist each person to find that working role he will eventually define as having meaning for him. It is designed in such a way that individuals of all ages can have access to those experiences which may have been unavailable to them.

For the purpose of this study, Vocational Skill Development or Vocational Education is considered a component of career education. This point of view is consistent with the Maryland State Department's Five Year Action Plan for Career Education.

Part A

Directions: Please supply the information requested, check the appropriate responses. Please answer all questions. All information will be treated as confidential.

1. What is your age?

____Under 30, ____31-40, ____41-50, ____51-60,____Over 61

2. How many years have you been in your present position?

____Under 10,____11-20,____Over 21

3. What official position did you hold before becoming an administrator or supervisor?

____Teacher(Subject matter area_____)
____Counselor
____Other (Specify_____)

4. What is your sex?

_____ Male _____Female

5. Are You:
___American Indian, ___Black, ___Mexican-American,
___Puerto Rican, ___White, ___Other (Please Specify)____

6. Where should career education begin?

____The elementary school, ____The junior high school,

____The senior high school, ____The middle school

7. Since June, 1972, how many times have you received and utilized information about career education from the following sources?

Inservice	Conference	Publications	News Media
____Never	___Never	___Never	___Never
____1 to 2	___1 to 2	___1 to 2	___1 to 2
____3 to 4	___3 to 4	___3 to 4	___3 to 4
____more than 4	___more than 4	___more than 4	___more than 4

College or University Courses

____Never, ____1 to 2, ____3 to 4, ____more than 4

Directions: Please check the response which most closely represents your feelings about each item. The items are not considered to be answered in terms of right or wrong. Do not spend too much time on any one item. Place a check in the space which most closely corresponds with your feelings about the statement. Select only one of the responses. Please answer all items.

Mark /x/ / / / / / / if you strongly agree.
SA A MA U MD D SD

Mark / /x/ / / / / / if you agree.
SA A MA U MD D SD

Mark / / /x/ / / / / if you moderately agree.
SA A MA U MD D SD

Mark / / / /x/ / / / if you are undecided.
SA A MA U MD D SD

Mark / / / / /x/ / / if you moderately disagree.
SA A MA U MD D SD

Mark / / / / / /x/ / if you disagree.
SA A MA U MD D SD

Mark / / / / / / /x/ if you strongly disagree.
SA A MA U MD D SD

/ / / / / / / / / 1. Schools should place greater emphasis on helping to prepare students for employment after high school.
SA A MA U MD D SD

/ / / / / / / / / 2. Public schools have not helped in giving sufficient orientation about occupational choices to students.
SA A MA U MD D SD

/ / / / / / / /
SA A MA U MD D SD

3. Most vocational education programs offered by the public schools are in need of modification.

/ / / / / / / /
SA A MA U MD D SD

4. The vocational education programs in Maryland public schools benefit enought students to justify the cost.

/ / / / / / / /
SA A MA U MD D SD

5. Career education should provide skill, information, and help in developing attitudes about the personal, social, and economic significance of work.

/ / / / / / / /
SA A MA U MD D SD

6. Career education has no significant part to play in the public schools of Maryland.

/ / / / / / / /
SA A MA U MD D SD

7. The present vocational education programs in the public schools should be expanded.

/ / / / / / / /
SA A MA U MD D SD

8. Expanding the present vocational education programs will not change their effectiveness in aiding students to gain successful employment.

/ / / / / / / /
SA A MA U MD D SD

9. The junior high-middle school should assist the students in identifying specific career areas for which they may be prepared in high school.

/ / / / / / / /
SA A MA U MD D SD

10. Career education should involve all levels of education from kindergarten through the twelfth grade.

/ / / / / / / /
SA A MA U MD D SD

11. The junior high-middle school should promote exploratory experience for students through career education.

/ / / / / / / /
SA A MA U MD D SD

12. The high school should promote exploratory experiences in students through career education.

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/ / / / / / / / / 13. Career education in the junior high school should involve the exploration of specific clusters of occupations.
SA A MA U MD D SD

/ / / / / / / / / 14. In the exploration of occupations, first-hand experience, field trips, and classroom instruction would best help the student gain insight into the various occupations.
SA A MA U MD D SD

/ / / / / / / / / 15. Subject matter may be enhanced by including the career implications of that subject matter.
SA A MA U MD D SD

/ / / / / / / / / 16. Students have not been provided with career exploration early enough in their educational development.
SA A MA U MD D SD

/ / / / / / / / / 17. The main purpose of career education is to help the minority groups.
SA A MA U MD D SD

/ / / / / / / / / 18. The present philosophy of vocational education should be expanded to the broader concept of career education.
SA A MA U MD D SD

/ / / / / / / / / 19. Career education should involve all grade levels of students; should cover the entire range of careers- unskilled, skilled, technical, and professional; and it should involve all the disciplines in education.
SA A MA U MD D SD

/ / / / / / / / / 20. There are not enough students involved in the present vocational programs in the public schools.
SA A MA U MD D SD

/ / / / / / / / / 21. The career education concept could unify the academic and vocational approaches to education.
SA A MA U MD D SD

APPENDIX B

Definition of Terms

Terms used in this study were defined as follows:

Attitude was considered "a relative enduring system of evaluative, affective reactions based upon the reflecting of the evaluative concept or beliefs which have been learned about the characteristics of a social object or class of social objects.[1]

Attitude toward career education was expressed by the respondents through their responses to statements on the Likert-type Career Education Attitude Scale.

Career education represented the coordinated efforts of education and the community to familiarize, prepare, and assist each person to find that working role he will eventually define as having meaning for him. It is designed in such a way that individuals of all ages can have access to those experiences which may have been unavailable to them.[2]

Key administrative-supervisory personnel was defined as district level or central office personnel in Maryland LEA's. Their titles vary, depending upon the organization and structure of each local education agency: Superintendent, deputy, associate, and assistant superintendent, director, specialist, supervisor and school principal.[3]

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[1]Marvin Shaw and Jack Wright, Scales for the Measurement of Attitudes (New York: McGraw-Hill, 1972), p.31.

[2]Mary.and State Department's Task Force for Career Education, Career Education Resource Notebook (Maryland State Department of Education, July 1973), p. 1-3.

[3]Lee C. Deighton, ed. The Encyclopedia of Education (New York: The MacMillan Company and the Free Press, 1971), Vol I, pp. 396-397.

Area vocational education schools[1] were considered any public school or public institution which falls in any of the following categories:

a) Vocational education school is a special high school used exclusively or principally for the provision of vocational education to persons who are available for study in preparation for entering the labor market.

b) Vocational-technical center is a technical or vocational school used exclusively or principally for the provision of vocational education to persons who have completed or left high school and who are available for study in preparation for entering the labor market or to provide vocational education programs for a number of secondary students from more than one high school.

c) The department of a high school exclusively or principally used for providing vocational education in no fewer than five different occupational fields to persons who are available for study in preparation for entering the labor market.

Comprehensive High School was defined as a high school which offers fewer than five different occupational fields.

Occupational fields was defined as a group of recognized, new, and emerging occupations in the group. The term is applied

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[1]US Department of Health, Education and Welfare, Federal Register, Section 102.3, Definitions, Vol. 35, No. 91, State Vocational Education Programs (Washington, D.C.: US Government Printing Office, 1970), pp. 7335-7336.

in the case of federal participation in the construction of an area in vocational schools to determine whether a department of a certain type of high school provides vocational education in no fewer than five different occupational fields.

Local education agencies[1] are defined as the 23 counties and Baltimore City comprising the school districts of the State of Maryland. The purpose and responsibility of each of these agencies are the operation and management of public education within their respective jurisdictions.

Vocational education was defined as embracing all the experiences an individual needs to prepare for some useful occupation. (The purpose of vocational education is to provide training, to develop skills, abilities, understanding, attitudes, working habits, and appreciations, and to impart knowledge and information needed by workers to enter and make progress in employment on a useful and productive basis.)

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[1] State of Maryland, The Public School Laws of Maryland, 1972 Cumulative Supplement Maryland School Bulletin No. 3, Vol. XLVIII (December 1972).